UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/505,300	08/20/2004	Toshiyuki Masuda	5404/89	5163

7590 10/31/2005

Richard G Lione
Brinks Hofer Gilson & Lione
PO Box 10395
Chicago, IL 60611

EXAMINER	
SANDERS, KRIELLION ANTIONETTE	
ART UNIT	PAPER NUMBER
1714	

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/505,300	MASUDA ET AL.	
	Examiner	Art Unit	
	Kriellion A. Sanders	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-16 is/are pending in the application.

4a) Of the above claim(s) 1-16 is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-16 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 8/04.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of the species comprising phosphates of formulae 9 and 10 in the reply filed on 8/18/05 is acknowledged.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent No. 61-245309 in view of Japanese Patent No. 10-219519, and Endo et al., US Patent No. 4127590, (all cited by applicant).

4. Japanese Patent No. 61-245309 discloses a polyester fiber comprising polyalkylene terephthalate, a polyarylate, a phosphite compound and additional conventional additives including other conventional flame retardants. See page 3, line 16. The patent fails to disclose a polymer alloy of a polyalkylene terephthalate and a polyarylate, however, since applicant's claims do not differentiate between the polyalkylene terephthalate of component A and B, the alloy is represented by the Japanese patent by virtue of the polyalkylene terephthalate and polyarylate being dry-blended. The patent also fails to list specific flame retardant additives, and specifically specific phosphorus flame retardant additives However because the phosphorus flame retardants are so well known in the art, it would have been obvious to one of ordinary skill

in the art at the time of applicant's invention to include a conventional phosphorus flame retardant such as those disclosed by Japanese Patent No. 10-219519, and Endo et al., US Patent No. 4127590 to provide their associated flame retardant functions, absent a clear showing of unexpected results attributable to such a variation.

Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kyo et al, US Patent No. 412342120 in view of Munday et al, US Patent No. 5151494 and further in view of Hobbs et al, US Patent No. 5308901.

Kyo et al discloses an aromatic copolyester composition comprising an aromatic copolyester derived from terephthalic acid, isophthalic acid and a bisphenol and aphosphorus compound corresponding to applicant's formula (3). The aromatic copolyester composition of this invention may further contain various other additives such as antioxidants, ultraviolet absorbers, antistatic agents and fire retardants. For example, the invention may be enhanced by adding the phosphorus-containing compound in conjunction with an antioxidant. Examples of suitable antioxidants include conventional phosphite-type antioxidants. In addition, plasticizers, pigments and lubricants can also be incorporated in the aromatic copolyester composition of the invention. Alternatively the aromatic copolyester composition may be reinforced with glass fibers. If desired, the aromatic copolyester composition of this invention may contain at least one additional polymer such a s polyalkylene terephthalates (e.g., polyethylene terephthalate or polybutylene terephthalate). Though patentee does not name the derivatives of terephthalic or isophthalic acid, "polyarylates" they correspond to the polyarylates of applicant's claims. See col. 4, line 4 through col. 7, line 67.

Hobbs teaches the well known pentaerythritol diphosphite flame retardants for polyesters. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to include a conventional phosphate flame retardant such as those disclosed by Hobbs et al into the compositions of Kyo et al to provide enhanced flame retardancy or antioxidative properties.

Munday et al also documents a polyester fiber including a phosphorus reactant. It is formed from a mixture of terephthalate acid or dimethyl terephthalate, ethylene glycol, a chain branching agent and a reactive phosphinic acid corresponding to that of applicant's formula (3). Patentee indicates that other typical additives may be employed in the fibers. See col. 1, line 12 through col. 5, line 63. It is known in the art to incorporate phosphorus agents into polyester fibers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kriellion A. Sanders whose telephone number is 571-272-1122. The examiner can normally be reached on Monday through Thursday 6:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kriellion A. Sanders
Primary Examiner
Art Unit 1714

ks